

NOTES ON COREIDAE IN THE COLLECTION OF THE
U. S. NATIONAL MUSEUM WITH DESCRIPTION
OF A NEW CATORHINTHA (HEMIPTERA-
HETEROPTERA)

H. G. BARBER

ROSELLE, N. J.

Acanthocephala femorata Fab. = *granulosa* Dallas, Stål, Distant.

Hemipterists have for a long time listed and treated as distinct the Neotropical *Acanthocephala granulosa* Dallas and *A. femorata* Fab. from the southern United States. I have examined two of Distant's specimens of *granulosa* from the Biologia material deposited in the U. S. N. M.—a male from Teapa, Tobasco, and a male from Guatemala. These differ in no important respects from many specimens in the collection from several localities in Mexico and Central America. These agree with the Dallas type figured in the Biol. Centr. Am., Tab. 12, Fig. 9, and answer in all important respects Dallas' description. In the long series before me there is noticeable some variation in the character of the humeral angle as well as the nature of the hind tibial expansion, the premedian tooth may be obtuse or rounded. Coloration of the general surface as well as the antennæ show variations from testaceous-brown to black. After a careful comparison of these Neotropical specimens with many of what we recognize as *A. femorata* from Fla., Miss. and Texas, I am forced to the conclusion that they are one and the same and will therefore have to bear Fabricius' name. It is probably due to the mistake of Distant, concurred in by Uhler, in placing *A. Thomasi* Uhler as a synonym of *granulosa* that has delayed the discovery of this synonymy. I believed with Distant that *A. luctuosa* Stål is a synonym of *granulosa* and thus = *femoratus* Fab.

Acanthocephala Thomasi Uhler.

I have examined Uhler's type of this species in the U. S. N. M. collection, a male from Arizona, as well as a long series of both

sexes from the same state and from New Mexico. Uhler's species is very distinct from *granulosa* Dallas and not a synonym of that species as indicated by Distant in the *Biologia* and later agreed to by Uhler. It falls even in a different subgenus, *Acanthocephala* Laporte (Stål), as it has the posterior tibia widely expanded almost throughout and in the female with a distinct angle before the middle. *Thomasi* is relatively more elongate than *granulatus* with the corium of a reddish brown color. The terminal segment of the antennæ, the fore and intermediate tibia, all of the tarsi and the odoriferous orifices bright ochraceous red. The declivous face of the pronotum is more granular, the lateral margin of the pronotum is provided with closer set, finer and more acute tubercles; the posterior margin, before the base of the scutellum more strongly depressed. The antennæ are relatively longer and the first three segments piceous as well as all femora and the hind tibia except at extreme apex. The legs are distinctly longer in both sexes. In the male the hind femora are relatively less swollen, less curved and more gradually contracted at base; the hind tibia within, very narrowly and almost evenly expanded, very slightly widened towards base; this expansion narrower than the tibia itself, finely serrated along edge almost from the base, serrations formed into teeth on apical half. Outer expansion of hind tibia wide, slightly wider at about one-third way from base and very lightly narrowing toward apex; just before apex abruptly truncate. In the female nearly the basal half of the hind tibia within narrowly expanded, this almost evenly not abruptly rounded, its width less than one-third the greatest diameter of the outer expansion, very narrowly extended along the remainder of the tibia to near apex and finely serrated along inner edge; the outer wide expansion continued to very near the apex with an obtuse angle at its widest part just before the middle; towards apex from this tooth the outer margin of this expansion for some distance is almost parallel with the tibia, then just beyond its middle point it begins to gradually round off to end abruptly truncated just before apex; the simple part of the tibia being about as wide as the tibia.

Amblyomia bifasciata Stål.

Van Duzee in his Catalogue, p. 92, quotes Bank's Catalogue as authority for record of this species from the "Western States."

This record is undoubtedly an error based on a misidentification of Stål's species. No specimens of this species from the United States are to be found in the collections.

Mozena obesa Montandon.

Originally described from Florida. It has a wide range in the southern and western states, as I have seen specimens of it from Miss., Riley Co., Kan., and Nebraska.

Capaneus spurcus and **auriculatus** Stål.

Several specimens of the first named species from Arizona are in the collections as determined by Uhler. However *auriculatus* does not occur in the Uhler or other collection of the museum from the U. S. Uhler in 1876 records it from Mexico, Texas and New Mexico. Without more evidence I think this species should be excluded from our faunal lists.

Capaneus incubitor Fab.

Following Uhler's Catalogue Van Duzee listed this species as belonging to the genus *Capaneus*. It was described by Fabricius as *Lygaeus incubitor* from Carolina and so far as I can determine is a Coreid of unknown identity. Fabricius's complete description in his *Rhyngotorum*, p. 204, "L. thorace obtuse spinoso serratoque ante marginem niveo, corpore grieso" does not give much clue as to its identity. Furthermore its occurrence in Carolina would rather preclude it from that genus. Stål in his *Hemiptera Fabricana* questions this species as apparently it was missing.

Archimerus calcarator Fab.

This was recognized as a species distinct from *alternatus* Say by Uhler although he never described it. Specimens of this species from his collection at the U. S. N. M. bear the label *Archimerus inornatus* Uhl. written in his familiar handwriting.

Hymeniphera clavipes Fab. = *lobatus* Uhler not Burm.

Uhler's single specimen of this species in the collection of the U. S. N. M. from Is. of Grenada was labeled and listed by him as *lobatus* Burm. Although *H. lobatus* is a fairly common spe-

cies in the Greater Antilles, so far as my rather extensive records show, it is absent from the Lesser Antilles where it is replaced by the South American *clavipes* which I have seen from Trinidad.

Corecoris alternatus Dallas.

In my paper in Univ. Iowa Stud. Nat. Hist., X, 18, 1923, I listed the above species as questionably a synonym of *C. fuscus* Thunb. But from a more recent examination of five well marked specimens of Dallas's species from Colombia in the collections, I find that although the two species are closely related Dallas's species has good differential characters. The humeral angles are not bluntly rounded but form a distinct obtuse angle; the pronotum has two broad longitudinal black bands almost coalescing behind; the posterior margin before the scutellum is distinctly sinuate before the scutellum; the alternating yellow and black fascia of the connexivum form clean cut bands.

By means of the labeled Grenada specimens in the Uhler collection I find that Distant was correct in assigning Uhler's *C. batatas* as well as his *diffusus* (not Say) to *fuscus* Thunb. Uhler misidentifying *batatas* as *fusca* and mistaking *C. confluentus* Say for *Sagotylus triguttatus* H. S. did not recognize the true *confluentus* Say and called it *diffusus* Say. In his Check List of 1886 Uhler made another error in placing *cinnamomeus* Hahn as a synonym of *diffusus* Say. Thus from the evidence at hand it looks as if Uhler did not know *diffusus* at all and mistook the true *confluentus* for it. I would therefore arrange the synonymy as follows:

Corecoris fuscus Thunberg.

- = *confluentus* Say (= *Sagotylus triguttatus* Uhler 1876, not H.S.)
- = *batatas* Uhler 1893 and 1894 (not Fab.)
- = *diffusus* Uhler 1893 and 1886 (= *confluentus* Say).

Corecoris diffusus Say. (*cinnamomeus* Uhler 1886 not Hahn).

Sephina limbata Stål.

This is another species cited in error from the United States. Van Duzee questions the record "Calif." in his catalogue. In

the Uhler collection are two specimens of this species labeled in his familiar handwriting "Santa Cruz." This locality undoubtedly refers to Santa Cruz Island, Bay of California, from which Uhler received a number of Hemiptera recorded in his report on the fauna of Lower California. It is a fairly common neotropical species.

Sephina indierae Wolcott. Jn. Dept. of Agric. of Porto Rico, VII, 1923 (1924).

I have had the opportunity of examining two specimens of this recently described species deposited in the collections of the U. S. N. M. It is closely related to *S. maculata* Dallas from Jamaica, though considerably larger with the humeral angles more rounded and the ocelli placed further back in reference to the eyes. The maculations of bright red are of a different pattern in the two species. In *indierae* the lateral margins of the pronotum are bordered with black, somewhat expanded at the humeral angles, the red curved fascia not reaching the lateral margins as in *maculata*, but extending to the posterior margin; the black discal spot is rounded in front not truncated before; the transverse black fascia of the corium reaches the lateral margins.

Chelinidea Hunteri and **canyon** Hamlin.

Lest bibliographers overlook these records I wish to call attention to the reference in Proc. Royal Soc. Queensland, XXXV, No. 4, pp. 2, 3, 1923. The first named species is recorded from near Hermisillo, Mex. I have seen specimens of it from Tucson and Ft. Grant, Ariz., in the collection. The last named species is from Rio Frio Canyon, Texas. Hamlin also describes n. var. *texana* of *C. vittiger* Uhler from So. Texas and Mexico.

Margus repletus Van Duzee.

This recently described species also occurs near Los Angeles, Sta. Monica and Palm Springs, California, according to the data on the specimens of this in the U. S. N. M.

Catorhintha guttula Fab.

I have seen Uhler's specimens of *C. selector* from Grenada. Distant correctly assigned this to *C. guttula* Fab.

Catorhintha divergens new species

Color pale flavo-stramineous, pronotum posteriorly and corium, except narrowly along costal margins, suffused with ferrugineous. Fascia before the eyes (sometimes effaced) and two longitudinal stripes on basal antennal segment, a small black spot on the sides of ventral segments 2 to 5, black. Dorsum of abdomen sanguineous with a central elongate stramineous patch showing through the transparent membrane, the outer and inner limiting nervures dark brown. In fully colored examples the lateral margins of the pronotum are piceous and the punctures of the general surface darker. Beneath pale stramineous.

Head rather flat, about as long as wide, pale stramineous, with the surface roughly punctate, the inner orbits of the eyes reddish brown; the tylus somewhat strongly elevated and projected well beyond the jugae; the antenniferous tubercles unarmed; the post-ocular callosity not so prominent as in *selector*; the bucculae posteriorly much reduced, extending back on a line with the middle point of eyes; basal segment of rostrum not quite reaching base of head, extending back on a line with the posterior margins of the eyes, second segment about twice as long as the third segment and subequal to the fourth, the piceous apex of the latter reaching back to a point midway between the intermediate coxae. Antennae stramineous with the clavate basal segment outwardly provided with two black striae which coalesce near base, this segment subequal to third which is one third shorter than second, the terminal segment is broadly ferrugineous in the middle and a little longer than the second segment. Pronotum only a little wider than long; anterior angles prominent but obtusely rounded, between which lies the depressed narrow collar; the surface coarsely, ferrugineously punctate in somewhat transverse rows except on the anterior callosities; provided with a distinct median longitudinal pale callosed carina, evanescent just before the transverse ridge; the lateral edge compressed and lightly sinuate before the middle; humeral angles prominently projected, almost acute. Scutellum very evidently longer than wide, distinctly and evenly punctate, the apex pale and smooth. Corium suffused with ferrugineous especially laterally and posteriorly, the costal margins narrowly pale throughout; the clavus and corium coarsely and evenly punctate with ferrugineous except on the veins. Membrane vitreous; veins prominent, those along the inner and outer margins broken up and more or less irregular and embrowned.

Type: female, Paradise Key, Florida, collected by E. A. Schwarz and H. S. Barber, Feb. 21, 1919 (U. S. N. M. Collection). Paratypes: a male, Vera Cruz, Mex. (P. R. Uhler); two females Tampico, Mex., Dec. 15, collected by E. A. Schwarz; one female Tehautepec, Mex., collected by F. Knab; one female Santiago de las Vegas, Cuba, June 21, 1917, collected by P. Cardin. (All

in the collection U. S. N. M.) One male and two females Santiago de Las Vegas, Cuba, collected by S. C. Bruner, of the Agricultural Experiment Station.

Quite distinct from any other known *Catorhintha* from our fauna, being more elongate with much more prominent humeral angles than is usual in the genus. The post-ocular callosity is not very obvious. In the Tehautepec specimen the lateral margins of the pronotum narrowly and the punctures of the pronotum, scutellum and hemielytra are heavily infuscated with a distinct fuscous patch on the corium opposite the apex of the commissure; the membrane is non-transparent, fuliginous, with darker veins.

I take this opportunity to call attention to the fact that Stål's key to the Coreidæ (Ofv. Vet. Akad. Forh., 1867, p. 548, Section 66 (43)) is erroneous concerning the length of the bucculae so far as the genus *Catorhintha* is concerned. It should fall in his section 43 (66) close to *Ficana* if not identical with it (vide Fracker 1923).

Anasa Uhleri Stål.

This is another species undoubtedly cited in error as belonging to our fauna, probably based on a misidentification of Stål's species. There is a large paler variety of *tristis* from Arizona which has been confused with *Uhleri*. The two species are certainly very close. Besides the characters given by Stål it is broader across the pronotum posteriorly, the lateral margins of which are more obviously sinuate near the middle.

Paryphes rufoscutellatus Gray.

Still another extra limital species which occurs in Mexico and Lower California. No specimens from the United States are to be found in the extensive collection at the museum. Lower California should be substituted for California.

Savius jurgiosus Stål.

This Mexican species has not been recorded from the United States. There is a single specimen of it in the collection from Brownsville, Tex.

Darmistidus maculatus Uhler, 1893.

This is a synonym of *Xenogenus extensus* Distant as proved by a single specimen, without the head, from St. Vincent in the collection U. S. N. M. labeled in Uhler's handwriting *Darmistidus maculatus*.

THE INSECTS OF THE YÜ LI CH'AO CHUAN

The "Yü Li Ch'ao Chuan" or "Divine Panorama," a Taoist work distributed over the Chinese Empire by persons wishing to accumulate good deeds against the day of judgment, has been translated recently by Herbert A. Giles* and among the agencies of torture mentioned therein, insects play a small part. It is believed by the Taoist that his Purgatory is made up of Ten Courts of Justice lodged in dissimilar places at the bottom of a vast ocean which is located in the depths of the earth. Each court is divided into wards in which diverse kinds of torture are inflicted.

Insects are mentioned first in the fourteenth ward of the third court, presided over by His Infernal Majesty Sung Ti, where the sinners are tormented by insects and reptiles. In the sixth ward of the sixth court they are enclosed in a net of thorns and nipped by locusts. The ninth court is presided over by P'ing Têng and in the thirteenth ward of this court they are stung by wasps and in the fourteenth, tortured by ants and maggots, then stewed and wrung out. Such tortures are mild in comparison with the non-entomological ones of being boiled in oil, having the fingers ironed with hot irons, being licked by flames, pricked with steel prongs, pierced through the ribs, etc. However, provision is made for the wicked Chinaman to obtain partial or complete remission, and thus escape the tortures, by fasting, by prayer, by the circulation of copies of the Divine Panorama as warnings to others and by other devices.—H. B. W.

* Strange Stories From a Chinese Studio, Appendix 1 (New York, 1925).